

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: HAUNTED LAKE	Lake Area (ha): 69.08
Town: FRANCESTOWN	Maximum depth (m): 5.2
County: Hillsborough	Mean depth (m): 2.4
River Basin: Merrimack	Volume (m ³): 1361500
Latitude: 42°59'01" N	Relative depth: 0.6
Longitude: 71°45'50" W	Shore configuration: 1.28
Elevation (ft): 636	Areal water load (m/yr): 13.05
Shore length (m): 3400	Flushing rate (yr ⁻¹): 5.40
Watershed area (ha): 1528.1	P retention coeff.: 0.52
% watershed ponded: 0.4	Lake type: natural

BIOLOGICAL:

23 January 2003

24 June 2002

DOM. PHYTOPLANKTON (% TOTAL)	#1	SPARSE - NO DOMINANT	DINOBRYON 40%
	#2		ASTERIONELLA 30%
	#3		
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			4.22
DOM. ZOOPLANKTON (% TOTAL)	#1	NAUPLIUS LARVA 21%	KERATELLA 23%
	#2	KERATELLA 18%	CONOCHILUS 16%
	#3	POLYARTHRA 18%	NAUPLIUS LARVA 16%
ROTIFERS/LITER		45	71
MICROCRUSTACEA/LITER		42	74
ZOOPLANKTON ABUNDANCE (#/L)		90	164
VASCULAR PLANT ABUNDANCE			Abundant
SECCHI DISK TRANSPARENCY (m)			2.2
BOTTOM DISSOLVED OXYGEN (mg/L)		7.4	1.5
BACTERIA (E. coli, #/100 ml)	#1		< 10
	#2		< 5
	#3		

SUMMER THERMAL STRATIFICATION:

weakly stratified

Depth of thermocline (m): None
Hypolimnion volume (m³): None
Anoxic volume (m³): None

CHEMICAL:

Lake: HAUNTED LAKE

Town: FRANCESTOWN

	23 January 2003		24 June 2002		
DEPTH (m)	1.5	3.0	2.0		4.5
pH (units)	6.1	6.1	6.7		6.3
A.N.C. (Alkalinity)	4.1	5.4	3.9		4.0
NITRATE NITROGEN	< 0.05	< 0.05	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.30	0.40	0.30		0.60
TOTAL PHOSPHORUS	0.008	0.011	0.021		0.018
CONDUCTIVITY (μ mhos/cm)	78.1	76.9	67.1		69.7
APPARENT COLOR (cpu)	37	38	49		51
MAGNESIUM			0.74		
CALCIUM			3.4		
SODIUM			7.2		
POTASSIUM			0.54		
CHLORIDE	13	12	11		11
SULFATE	7	7	6		5
TN : TP	38	36	14		33
CALCITE SATURATION INDEX			3.5		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 2002

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	3	5	1	9	Meso.

COMMENTS:

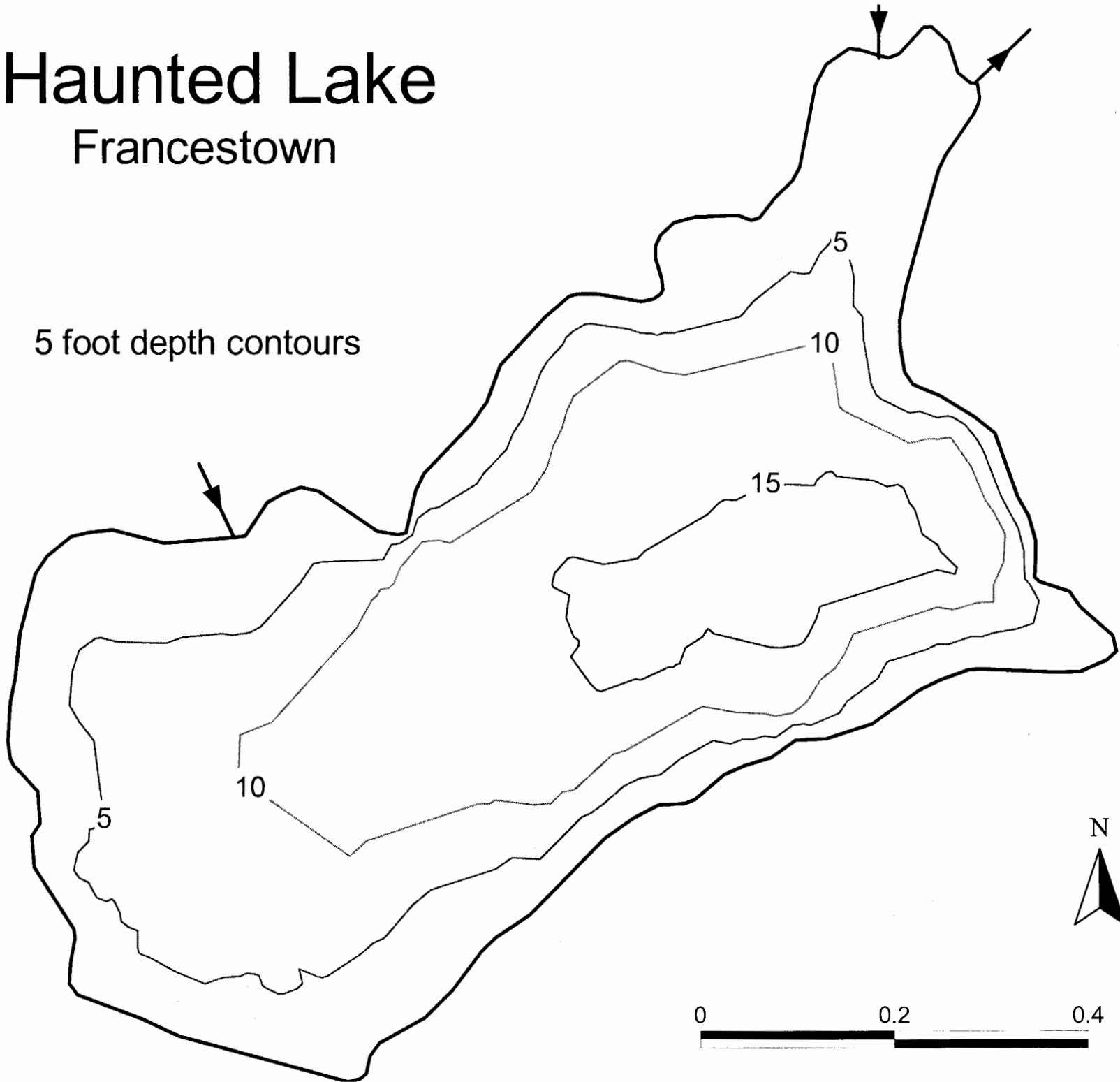
1. aka Scobie Pond.
2. Previously surveyed in 1980. Little change in trophic parameters between the two years – the lake was borderline meso/eutrophic in both years.
3. Juvenile camp was present along with approximately 20 cottages.
4. Rough launch site with little parking.

Haunted Lake

Francestown

5 foot depth contours

III-102

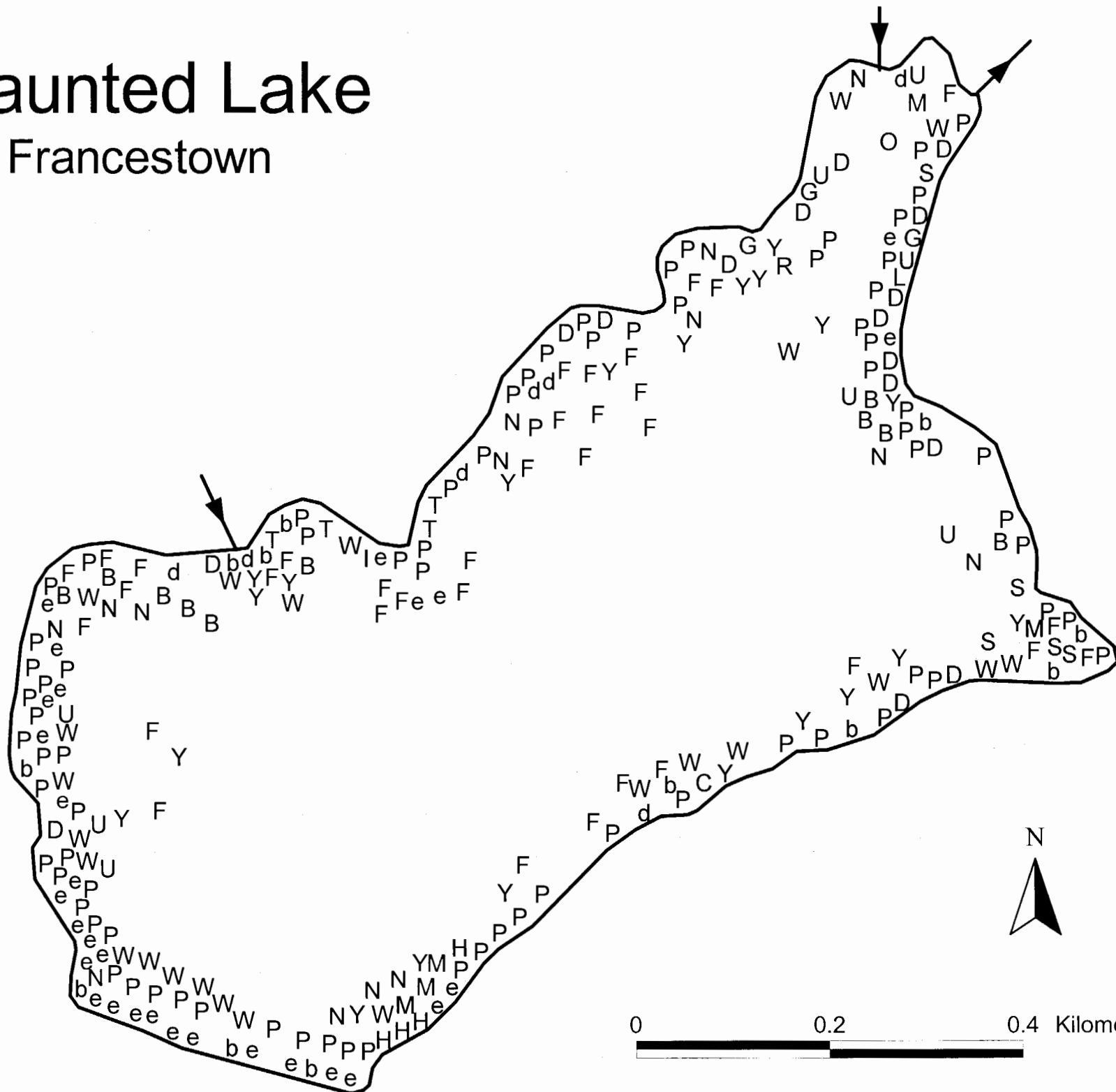
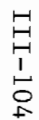


0 0.2 0.4 Kilometers

[illegible]

Haunted Lake

Francestown



N

0

0.2

0.4 Kilometers

AQUATIC PLANT SURVEY

LAKE: HAUNTED LAKE

TOWN: FRANCESTOWN

DATE: 06/24/2002

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
d	Dulichium arundinaceum	Three-way sedge	Scattered
P	Pontederia cordata	Pickerelweed	Common
F	Nymphoides cordatum	Floating heart	Common
W	Potamogeton	Pondweed	Common
U	Utricularia	Bladderwort	Scat/Common
S	Sparganium	Bur reed	Sparse
D	Decodon verticillatus	Swamp loosestrife	Common
L	Lysimachia terrestris	Swampcandle	Sparse
Y	Nuphar	Yellow water lily	Scat/Common
G	Gramineae	Grass family	Scattered
e	Eleocharis	Spike rush	Scattered
B	Brasenia schreberi	Water shield	Scat/Common
N	Nymphaea	White water lily	Scat/Common
R	Sium suave	Water parsnip	Sparse
T	Typha	Cattail	Sparse
I	Iris	Iris	Sparse
H	Equisetum	Horsetail	Sparse
C	Cyperaceae	Non-flowering sedge	Sparse
O	Elodea nuttallii	Waterweed	Sparse
b	Scirpus	Bulrush	Scattered
M	Myriophyllum heterophyllum	Water milfoil	Scattered

OVERALL ABUNDANCE: Abundant

GENERAL OBSERVATIONS:

1. Plant growth was around the entire shoreline.
2. The exotic species of milfoil was not observed during this 2002 plant survey but was subsequently discovered in 2003. It was scheduled for a herbicide treatment in 2004.